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AN ADVERTISEMENT SALES AND MANAGEMENT COMPUTER SYSTEM

FIELD OF THE INVENTION

5   The present invention relates to an advertisement sales and management system that provides a comprehensive advertising solution concept, which integrates the total advertising workflow into a complete advertisement sales and management system capable of handling all kinds of advertisements booked for multiple media.

10   The system according to the present invention is capable of providing significant cost and time efficiencies in the sales, production and management of advertisements.

BACKGROUND OF THE INVENTION

15   Advertisement sales and management systems have traditionally been based on computer systems and programs that were adapted to handle advertisements in a specific type of medium such as newspapers. Newspaper advertisements comprise classified advertisements and retail advertisements that are placed on editorial pages of the newspaper as well as inserts in the newspaper.

20

Accordingly, such prior art advertisement sales and management systems have only been capable of managing e.g. an advertisement order for a single type of media, such as newspapers, magazines or other printed media. Accordingly, a customer and/or agency wishing to book an advertisement for several differing media, e.g. a particular

25   newspaper, the Internet and at a commercial radio station, would have to administrate the booking procedure through several different contact persons each working on his/hers proprietary advertisement management program and/or computer system.

This booking procedure is, obviously, both complicated and time consuming since the

30   customer and/or agency must keep track of when and where the advertisement is to be published in the respective media to secure that for instance an advertisement campaign is properly co-ordinated. Furthermore, the customer and/or agency must also check and manage invoices for several different suppliers and make certain that

volume discount rates, variable discount rates or other special discount rates are properly applied to the order in each media.

SUMMARY OF THE INVENTION

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It is an object of the invention to provide an advertisement sales and management system which is particularly well adapted to requirements of newspaper and magazine publishers, but at the same time integrates sales and management of advertisements in other media including electronic media.

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It is also an object of the invention to provide a single advertisement sales and management system permitting management of several related advertisements in several media based on entry of a single order. In particular, the present system provides the possibility of, on the fly, entry and price calculation of an advertisement

15　order for several differing media, such as printed media and electronic media.

The basic philosophy of the system provided by the present invention has been to provide a solution with a central database means. This database means is surrounded by a number of applications, proprietary or third party products, designed to support

20　the entire advertising sales and management workflow.

The database means may be used for all advertisement sales and management elements: images, text and graphics and advanced electronic media elements, as well as relevant administrative information.

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DESCRIPTION OF THE INVENTION

One aspect of the invention relates to an advertisement sales and management computer system comprising:

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data storage means, data retrieval means and data processing means

database means

and a number of workstations,

one or more of the workstations being adapted to perform one or more of the tasks
selected from the group consisting of:

5

entering advertisement orders into the database means,
entering advertisement-associated data into the database means and retrieving
advertisement-associated data from the database means
entering customer and/or agency-associated data into the database means and
10 retrieving customer and/or agency-associated data from the database means,

the database means being adapted to store and manage data comprising at least

- advertisement customer and/or agency information,
15 • order data comprising data related to an advertisement or a group of related
  advertisements, including
  - the medium or media in which the advertisement or individual advertisement of
  the group of related advertisements is/are to appear, and
    - schedule information for publication of respective advertisements, the
20   schedule information comprising insertions of the respective advertisements in
      respective media,
  - contents of respective advertisements,
  - presentation elements of respective advertisements,

25 the computer system being adapted to generate data defining advertisements or groups
of related advertisements on the basis of entered order data,

the computer system constituting a single system permitting sales and management of
several related advertisements in several media based on entry of a single order.

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The several media may comprise several paper media such as newspapers, magazines,
and posters, but according to an important embodiment of the present invention, the

system is adapted to handle one or more electronic media, preferably together with one or more paper media.

In the present specification and claims, the term "advertisement sales and management" designates all operations which are involved in the entering, selling, defining or creating advertisements in the form of electronic data defining the advertisements within the computer system. The physical production of the advertisements in the respective media will typically be performed using a special production system which may or may not be integrated with the advertisement sales and management system of the present invention. However, the fact that the system according to the invention has, as one of its attractive features, the capability of creating advertisements in multiple media including electronic media such as the Internet makes it possible and advantageous to create the full representation of an advertisement in such a media as a part of entering the advertisement in the system.

Other operations which are also covered by the term "advertisement sales and management" are a number of administrative tasks such as pricing, accounting, customer and/or agency contract handling, creating statistics, sales automation, etc. Also, it is within the scope of the system of the invention to enter data representing response to advertisements, such as awareness polls results, the frequency with which an advertisement on the Internet is visited, etc., and to relate such response data to the particulars of the customer or the group of customers, the design and nature of an advertisement campaign, etc.

The computer system used according to the invention may be any suitable conventional or proprietary computer system. Preferably, a client/server architecture is utilised for the above-mentioned individual elements of the computer system. This architecture reduces the load on the database and guarantees a quick response time for the end users or operators. The client workstations are, preferably, personal computers (PCs) which, preferably, run a Windows NT operating system.

The database means of the system is to be understood as a database in the broadest sense of this term, since a database is basically a collection of data or information which has been organized for ease of search and retrieval; thus the database means

may comprise a flatfile database structure, a relational database structure, an object oriented database structure or any suitable combination thereof for the organisation of advertisement data or information.

5   Individual components of the database means may be provided in close physical proximity of each other, e.g. one of several servers located in the same or adjacent rooms or, alternatively, be provided in a fragmented structure where the individual components are in communication with each other over a public or proprietary computer network.

10

It is presently preferred to implement the computer system as a client/server relational database with data object facilities. The database program as well as entered/created advertisement data may be stored in one or more hard-disc drives comprised within the server or server means and loaded into RAM memory of the server means during

15   program execution.

As an example, the database means of the system may be an Oracle SQL database running on a server or servers of the computer system, preferably an AIX or UNIX server(s) provided with mirrored disks. This database may comprise all advertising

20   booking, selling, production and administrative information.

One or more of the workstations of the computer system is/are adapted to perform one or more of the tasks: entering advertisement orders into the database means, entering advertisement-associated data into the database means and retrieving advertisement-

25   associated data from the database means, entering customer and/or agency-associated data into the database means and retrieving customer and/or agency-associated data from the database.

When a customer and/or agency for the first time places an advertisement order in the

30   present advertisement sales and management system, data associated with this customer and/or agency may be entered into the system. Typically, this data may comprise customer specific data, such as name, customer ID, address, associated subsidiaries or, alternatively, head office information, etc. Furthermore, customers and/or agencies registered in the system are preferably related to one or more account

records which include financial information such as, terms of payment, credit limits, etc. A customer and/or agency may have more accounts if it has different financial terms for different activities. The next time the same customer and/or agency wants to place an advertisement order in the system, a workstation operator is able to retrieve

5 customer and/or agency-associated data from the database to locate relevant information about the customer and/or agency in question. This data retrieval may be provided by a software module that provides extensive search functionality to the workstation operator so that any required customer and/or agency information may be retrieved and displayed.

10

The advertisement orders that can be entered into the system may comprise a rather comprehensive structure, defining an advertisement or a group of related advertisements. In the present specification and claims, the term "advertisement" may be any type of advertisement, published in electronic or printed format, offering a

15 service or product to the public. "A group of related advertisements" designate a group of advertisements that substantially have the same form with respect to contents and meaning, but wherein each advertisement may be adapted for publication in a particular medium.

20 The present invention supports an advertisement order concept that facilitates management of a group of related advertisements which include electronic advertise- ments for publication on e.g. the Internet, television and radio fully integrated with the management of traditional newspaper classified and retail advertisements. Accordingly, advertisement order data comprise information related to the medium or

25 media in which the advertisement or the individual advertisements of the group of related advertisements is/are to appear. Each advertisement entered into the system is further provided with data that comprise schedule information for publication of the advertisement in question. This schedule information defines one or more insertions of the respective advertisements in respective media. Preferably, a schedule is

30 provided for each species of the media that is associated with a particular advertisement. As an example, an order for a newspaper advertisement may be entered into the system and these order data may comprise several schedules, each schedule defining any number of insertions of the advertisement in e.g. a particular newspaper.

In the present specification and claims, the term "contents of respective advertisements" designates the media-independent information contents of the advertisement. In the case of printed media, the contents of the advertisement

5 comprise the meaning or the message including pure textual contents e.g. the words, letters, signs, numbers and artwork as such, independent of presentation elements. For text, presentation elements typically comprise: font, font-size, borders, bolding or other graphical elements typically associated with the text. Other presentation elements are: the size of the advertisement in a printed medium, typeface, co-

10 ordinates for placement of text, relative positions between graphical information elements, colour of graphical information elements or parts thereof, borders, shading and three-dimensional effects.

The term "contents" also designates graphical information elements which often

15 provide meaning and message to the advertisement, such as logos, company logos, animations, pictures, videos and other message- or meaning related elements.

As indicated above, the term "presentation elements" designates substantially typographical/graphical parameters that define the visual and/or auditive appearance

20 of the contents of the advertisement. For printed media, these elements will typically be selected from: the size of the advertisement, typeface or font, font size, co-ordinates for placing text, relative positions between graphical information elements, colour of graphical information elements or parts thereof, borders, shading, three-dimensional effects.

25

According to a preferred embodiment of the present system, the database means is capable of storing and managing, based on a single order, a group of related advertisements each to be published in a particular medium. Each advertisement may have one or several sets of associated schedule information and each set of schedule

30 information may have associated therewith one or several insertions. The version of an advertisement published in an insertion is identical or non-identical to versions of the advertisement published in other insertions thereof. As an example, each of e.g. three sets of schedule information may be related to publications of the advertisement in a particular newspaper of a set of three different newspapers. The insertions of the

advertisement in a particular newspaper or among several different newspapers may all be different, thus consisting of different versions of the advertisement, or they may be identical, i.e. consisting of identical contents and presentation elements and as such constitute a particular version of the advertisement. This version of the advertisement

5 could subsequently be published as, e.g., four insertions in four consecutive daily newspaper editions, respectively, or four consecutive Saturday editions, respectively.

The database means of the computer system is capable of storing the advertisement data in a manner which makes it possible for the database means to accommodate the

10 above-described structure of an advertisement order. The structure of the advertisement order can be directly reflected in the manner in which the database means is designed, with a hierarchical structure established by means of data pointers between records such as shown in Fig. 2. It will be understood that the said order structure may be implemented in a number of ways such as establishing the

15 hierarchical data structure shown by adaptation of a suitable relational database. It will also be understood that the order structure could equally well be represented in an object database or in a configuration database. The important issue is that the database means is capable of storing and managing, optionally together with the data processing means, the data structure required by the most complex order structure

20 envisaged.

The database and the data processing means may be adapted to create versions of an advertisement on the basis of database data comprising contents of the advertisement and presentation elements of the advertisement. In this situation, consecutive

25 newspaper editions may contain different versions of the same advertisement so that e.g. each of the above-mentioned four consecutive daily newspaper editions would contain a unique version of the same advertisement. However, since each version of the advertisement may be built by selecting suitable content elements and presentation elements from the advertisement data of the database there is no need to define a

30 completely new advertisement for each unique version of the advertisement. Consequently, each version of the advertisement may be created by selecting appropriate elements from the database, and thus resource-demanding data duplication is avoided. Furthermore, since redundant information (i.e. data duplication) is avoided by using a single database for holding all advertisement data, the time spent on

maintenance of the system is significantly reduced. Another advantage is that advertisement data are not fragmented but linked to a single point so that updates or modifications to e.g. the contents of a particular advertisement may be produced across multiple media and even in multiple versions by modifying only a single or

5 few database elements. Consequently, the operator's task of managing complex advertisement orders is significantly simplified and thus made less vulnerable to errors.

The media may, as presently important examples, be selected from the group

10 consisting of: newspapers, magazines, paper or electronic books, electronic newspapers, electronic magazines, news streamers, running message displays, news-banners, TV, movies, data carriers such as CD ROMs, DVD discs, magnetic discs, DAT tapes, videos, radio, stationary telephones, mobile (cellular) telephones, teletext, public networks, including the Internet, inserts, onserts, and posters. Accordingly, the

15 present system may be capable of managing a customer's and/or agency's advertisement order which relates to any of these printed or electronic media or any combination thereof.

Preferably, a number of attributes are stored in the database and associated with the

20 data defining each insertion, the attributes comprise attributes selected from the group consisting of: title of a specific species of the medium, zone of the specific species of the medium, section/classification of the particular species of the medium, the version of the advertisement, as defined by contents and presentation element data, time-and/or event-related data for the publication of the advertisement. Accordingly, these

25 attributes are associated with the publication of the advertisement in a particular medium, and a set of attributes which is meaningful in the context of a specific medium is preferably defined. As an example, attributes related to the section, page number and classification may only be of relevance for newspapers or for magazines but not for Internet publication of the advertisement; on the other hand, an attribute

30 relevant to Internet publication is, e.g., the number of visits for which an Internet advertisement is to be maintained.

According to a preferred embodiment of the invention, price data are stored in the database means so that they are relatable to advertisement data selected from the

group consisting of: the physical presentation of the advertisement established on the basis of the contents and the presentation elements of the advertisement, insertion data/attributes, schedule data, media data, customer and/or agency data, and order structure, thus enabling calculation of the price of an order when the order has been

5   fully defined. Furthermore, the customer and/or agency data may comprise information about specific customer and/or agency contracts. Accordingly, the system may calculate the price of an advertisement or a group of related advertisements based on customer and/or agency price agreements.

10 The above-mentioned considerations demonstrate that the present system can handle the complex structure of parameters that often influence the price of an advertisement. The parameters that influence the pricing of advertisements may be related to the individual customer and/or agency, the contract or contracts, the classification, the rate structure of the newspaper and/or other media and the special discount or rebate

15 structure of the individual customer and/or agency. Furthermore, the price of the advertisement will often vary according to the advertisement type, the size of the advertisement, the package for which the advertisement is booked, the publication schedule or schedules of the advertisement, special requests for page and position, colour usage, amount of special build up to be performed, use of logos, images and

20 graphics as well as other properties assigned to the advertisement.

A customer and/or agency can be part of a group of customers and/or agencies. The relations between e.g. the customers and/or agencies within a group are preferably reflected in the database in a many-layered hierarchy. The hierarchy can be used for

25 representing the relations between, e.g. corporate offices, subsidiaries and branch offices and thereby ensure that the advertisement sales and management system is capable of correctly applying e.g. contracted discount rates to individual customers and/or agencies with highly complex relationships to other customer and/or agencies represented within the system.

30

According to another preferred embodiment of the invention, the calculation and display of the price of an order is performed dynamically during establishment of the order, a price displayed on the display of a workstation reflecting the aspects of the order which have been defined or which are being defined. This dynamic price

display during building of the advertisement may be enabled by transferring entered and/or created advertisement-associated information and customer and/or agency data, such as word and line count, use of logos, use of frames, use of colour, customer and/or agency ID, etc. to a program or a module operating as a pricing engine. This

5　pricing engine may, based on the above-mentioned data, dynamically calculate a current price for the advertisement under creation. By displaying this cost information on the operator's screen, the operator will be able to continuously inform the customer and/or agency about the current cost of an advertisement. This pricing engine may be running on the server means or alternatively, on one or more of the client

10　workstations.

The entry or editing of graphical advertisement contents and presentation elements in the database may be provided by means of a WYSIWYG editor which communicates with data stored in the database defining graphical presentation elements of the

15　advertisement stored in the database and is adapted to display, on a screen of at least one workstation of the system, the information elements in the graphical representation defined by the data. This WYSIWYG editor is first of all a fast and efficient tool for creating and/or editing complete lineage advertisements or semi-display advertisements or for writing text blocks that may be passed on to an

20　associated production system and used in the advertisement make-up process. The WYSIWYG editor may have access to a number of predefined advertisement templates (standard advertisements) as well as graphical presentation elements that can be used as the basis for fast creation or building of advertisements. Accordingly, the WYSIWYG editor may allow on the fly completion of some types of

25　advertisements, such as classified lineage advertisements, semi-display advertisements, etc.

In another preferred embodiment of the invention, the system comprises data transfer means, such as address pointers, serial or parallel databuses, public telephone

30　networks, LANs, WANs, public networks including the Internet for communicating advertisement data from the database to a file, file system or database means associated with an advertisement planning and/or production system. Preferably, an advertisement planning and production system is tightly integrated with the present advertisement sales and management system. Furthermore, other software modules

may also be used in the environment such as editorial systems, fax, electronic funds transfer, automatic call distribution (ACD), archive, etc. Standard APIs and integration tools may also be provided in order to facilitate such integration tasks for the integration of any other third party products.

5

The data stored and managed by the database means may comprise data defining a graphical user interface and/or other function parameters of an individual workstation or individual workstations, and/or the data model used from an individual workstation or individual workstations in the computer system.

10

With respect to the graphical user interface, one implementation thereof can be as follows:

The overall split of the system in layout, functionality and database access can be

15   made using the following guidelines:

- Layout of the graphical user interface (GUI) may be placed in description files
- Clean interface between the GUI and the functionality
- Easy access to the database
- Database consistency placed in the database access layer

20

Reference is made to Fig. 3 which shows this three layer architecture

A Virtual User Interface that may be implemented does not contain layout or format information. The interface contains fields with values, lists, commands and events.

25   The GUI Engine translates the Virtual User Interface to a specific layout in a dialog with buttons, menu items, shortcuts and fields with formats.

The Database Access:

The database access handles:

30   - Fetching and updating the database
- Translation of links to foreign keys
- All consistency checks

Access rights:

The handling of access rights and overall access security may be handled in a manner where access profiles may be specified based on for instance:

- User group
5 - User role
- Personal set-up

This will provide the ability to restrict and grant access to applications and areas of the system based on the specific requirements of a given user or operator.

10 Applications and Application Units:

The final solution will contain several applications, e.g., about 20 applications. Each application supports a user in a given user situation, e.g. the advertisement order entry users may have an Advertisement Order Entry application and a contract maintenance user may have a Contract application.

15

With this definition of an application, more applications will contain shared functionality. To solve this and other problems applications can be divided into application units as illustrated in Fig. 4.

20 The main reasons for defining application units are:

- Reuse of software modules
- Low interaction with other Application Units
- Reflecting Domain Objects from the analysis
- Not too big
25 - Not too small

An example of a design editor implementing the above-described technology is shown in Fig. 4.

30 The design editor is used for making dialogs. It reads a description of a virtual user interface (called, e.g., an application unit description) from the application unit. The description is supplemented with the description of the database (data dictionary).

Furthermore, the defining data may be related to a target media for an advertisement or advertisements being sold or managed, and/or to a task of a workstation operator, and/or access rights of the operator. Preferably, the access rights and/or the graphical user interface which are/is granted to individual workstation operators in the system reflects the role of the operator in the advertisement sales and management workflow. As an example, an operator given the task of creating and entering classified semi-display advertisements into the system may not have access rights to database data associated with certain information elements such as photos, sounds, videos, and animations. The graphical user interface may also reflect these access rights so that only elements that are relevant for the operator in performing his/hers assigned task are displayed on the workstation screen. Preferably, the system enables the graphical user interface and/or other function parameters of the individual workstation(s) and/or the data model to be customised to the individual operator without modifying binary code of the computer system

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of an advertisement sales and management system is illustrated in the drawings.

Fig. 1 of the drawings illustrates various components comprised in the advertisement sales and management system according to the present invention and an associated advertisement production system.

Fig. 2 of the drawings illustrates a simplified example of an order structure and the corresponding database structure, the order structure comprising two related advertisements, one being a newspaper advertisement, the other one being an Internet advertisement. It will be seen that each of the advertisements has a number of schedules related thereto, each schedule being associated with a number of insertions (some of the insertions and the lower-hierarchial data are not shown). Each insertion has a "material" related thereto, either as shown through a "material" level of data which in turn is associated with advertisement contents and advertisement presentation elements, or (as not shown) by direct relation between the insertion data level and the contents and presentation elements level. Each insertion has a number of

attributes which are relevant to the media in question. As an example, a newspaper advertisement may have at least the following attributes:

Media Title   Classification   Publication date: First   Last

5

and an Internet advertisement may have at least the following attributes

Organization or Home Page Subdivision Publication date: First   Last (or number of exposures/visits)

10

It will be understood that the database will also, in most embodiments, comprise a number of additional attributes or associated data at various data levels; one prominent example is constituted by price-related data which are associated at most or all levels.

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Fig. 3 of the drawings illustrates a three layer model of the system architecture.

Fig. 4 of the drawings illustrates a design editor application implemented by a number of application units.

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DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

In the following, a specific embodiment of the invention is discussed in greater detail. It will be understood, and will be realised by the person skilled in the art, that the

25 invention is not limited to this embodiment, and that the individual modules described in this could be implemented in many other ways, or that some of the modules could be dispensed with or be replaced with other modules.

Technology

30 Fig. 1 shows an advertisement sales and management computer system according to a preferred embodiment of the present invention. The system is based on an open architecture running in a client/server environment. This architecture reduces the load

on an advertisement database 5 and guarantees a quick response time for the end users or operators.

The core of the system may be an Oracle SQL database running on high availability
5   AIX or UNIX servers 10 with mirrored disks. The database 5 may comprise all
advertising booking, selling, production and administrative information.

Client workstations 15, 16, 17, 18, 19, 20 are, preferably, personal computers (PCs)
running operating systems such as Windows NT, Windows 95, Windows 98, Linux,
10   etc. From a client workstation the user can access all relevant applications (i.e. a
single footprint environment). It is presently preferred that the client workstations 15-
20 are using Windows NT as an operating system, which provides the users with
access to a variety of standard desktop applications such as e-mail, web browser,
calendars, etc.
15

All hardware and software utilised in the system are operating according to respective
industry de facto standards, such as UNIX servers from IBM and Sun Microsystems,
Oracle SQL database, and Windows NT PCs.

20   Software modules implementing the present system are, preferably, written in C and
C++, and have graphical user interfaces based on industry standards such as Windows
NT.

Standard APIs and integration tools are, preferably, provided for the integration of
25   third party applications. This allows the use of, e.g. existing third party web solutions
that may be tightly integrated to any existing systems providing a powerful
supplement to these systems.

The system comprises a number of software modules that each implement a specific
30   function or functions in the present advertisement sales and management system. The
function of these software modules is explained and described in the following.

Order entry

The order entry module plays an important role in the present system. This module may be running on one or more Windows NT client workstations 15-20 as shown on Fig. 1 where the order entry runs on workstations 16, 17. The order entry module may

5 define the basic characteristics of an advertisement booking including, e.g., in which media the advertisement will be published, when it will be published and its visual and/or auditive appearance. Accordingly, the order entry module enables an operator at the client workstations 16, 17 to book both classified and retail advertisements for any type of media or combination of media and as such provides a single booking

10 procedure for simultaneously booking of an advertisement in several media.

Throughout the advertisement entry process the operator may be provided with relevant up-sell and down-sell prompts (e.g. a visual aid to the operator to enable him or her to sell more effectively) to assist the user in the dialog with the customer and/or

15 agency. The sales prompts are based on easily definable rules and parameter-driven tables that can easily be modified by the advertising staff without any technical assistance.

Visual aid

20 The entry of the advertisement booking information is optimized by means of both visual aids such as calendars showing the structure of advertisement bookings and related insertions as well as by easy access to information such as packages, product information, classifications, etc. The information can be selected from predefined lists either by means of keyboard shortcuts or by the use of a computer mouse.

25 The order entry module also accommodates different types of sales calls such as volunteered advertisements, canvassed advertisements and customer and/or agency inquiries.

WYSIWYG editor

30 The WYSIWYG editor may be a fully integrated part of the system. The WYSIWYG editor is first of all a fast and efficient tool for creating or editing complete lineage advertisements or semi-display advertisements and/or for writing text blocks that are

passed on to the production system and used in the advertisement make-up process. The WYSIWYG editor may include access to a number of predefined advertisement templates (standard advertisements) that can be used as the basis for fast building of semi-display advertisements. Accordingly, the WYSIWYG editor allows on the fly

5   completion of advertisements, such as classified lineage advertisements, semi-display advertisements, etc. or to create text input to an advertisement production department while taking the advertisement order.

In addition, the system preferably provides features that are adapted to receive

10   customer and/or agency service-associated data from the server 10, thus enabling viewing previously entered information on a customer and/or agency simultaneously with taking an advertising order. Preferably, a selection of previously built advertisements for the customer and/or agency in question is available. The operator may use a split screen to view these advertisements and, further, use a drag and drop

15   feature provided by the editor to copy a previously built advertisement or parts of it.

Additional supporting features or tools may also be provided such as a collection of standard shapes, logos, images and graphics and a collection of frame styles previously used by the customer and/or agency in question and from which he/she

20   may choose. This selection may be available as thumbnail presentations that can be sorted according to classification or seasonal/theme related events.

Accordingly, the WYSIWYG editor allows operators to build or make up advertisements in a true WYSIWYG fashion while talking to the customer and/or

25   agency.

During the advertisement building, the system may dynamically send advertisement-associated information, such as word and line count, use of logos, use of frames, use of special typeface, use of colour, etc. to another program or module operating as a

30   pricing engine i.e., a program dynamically calculating the current cost of the advertisement under creation. By displaying this cost information on the operator's screen, the operator will be able to continuously inform the customer and/or agency about the current cost of an advertisement. This pricing engine may be running on the server 10 or alternatively, on one or more of the client workstations 15-20.

In situations wherein the operator cannot finish an advertisement during the booking process, or if it turns out that a number of more sophisticated programs must be used, the operator may pass on all those advertisement objects which already were created

5   to an advertisement planning and/or production system 25 utilised within a production department. The production department can subsequently complete the job by using standard DTP applications such as QuarkXPress®, Multi-Ad Creator, etc. for advertisement production.

10   The word processing in this preferred embodiment is an implementation of Microsoft® Word which allows the workstation operators to enter complete lineage advertisements that require no further or only limited make-up. This word processing system may be used for spell checking and thesaurus and for simple text entry, which can be passed on to a production module as text blocks and used in the further make-

15   up process. Hyphenation and justification is handled automatically by a suitable module.

No identical tasks must be carried out more than once and, although a computer mouse is part of the PC equipment, all functions are available by using keyboard

20   shortcuts in the presently preferred embodiment.

Tight integration

In this preferred embodiment, there is a tight integration between the advertisement sales and management system and other systems used in the environment (e.g.

25   advertisement production and planning systems, editorial systems 30, fax 35, electronic funds transfer 40, automatic call distribution (ACD), archive 45, etc). Standard APIs and integration tools may also be provided in order to facilitate such integration tasks or the integration of any other third party products.

30   The order entry module preferably also provides the basis on which the price of the advertisement will be calculated, such as explained above.

Accounts

All customers and/or agencies registered in the system are related to one or more accounts. The customer and/or agency record includes all customer and/or agency specific information, such as name, customer and/or agency ID, address, etc. whereas

5   the account record includes the financial information such as terms of payment, credit limits, etc. A customer and/or agency has more accounts if it has different financial terms for different activities.

A customer and/or agency can be part of a group of customers and/or agencies. The

10   relations between the customers and/or agencies within a group are reflected in a many-layered hierarchy. This is used for representing the relations between, e.g. corporate offices, subsidiaries and branch offices. The ability to create and easily maintain the complex structure of a large number of customers and/or agencies and their belonging accounts as well as the relations between the various customer and/or

15   agency groups are an essential part of the system.

No redundant information

A hierarchical structure of customers and/or agenies and accounts is preferably used, thereby eliminating redundant information (i.e. data duplication). This reduces time

20   spent on maintenance and ensures that debtor records are not fragmented but linked to a single point. Every order is based on customer and/or agency and account information. The design of the system ensures that all customer and/or agency information only has to be entered once into the system. Similarly, changes to the information are corrected only once independent of the number of times the

25   information is used. When creating a new customer and/or agency or account, the system preferably provides functionality that easily validate the entered information, e.g. by taking into account the many postal codes and address standards used in different countries.

30   Extensive search functions

In order to make it easy to find a required customer and/or agency or account, extensive search functionality is also available in the system. When the correct

customer and/or agency or account is located, the user has access to an advanced contract module. A contract is a commitment by one or more customers and/or agencies to place a certain amount of advertising with a newspaper and/or other media publisher over an agreed period of time in return for a fixed or variable discount or

5   rebate.

The contract module provides functionality to easily create and maintain contracts covering classified advertisements, retail advertisements, multiple products (e.g. print and online), as well as multiple customer and/or agency accounts. The contract

10   module also makes it easy to specify or change the criteria that have to be met in order to fulfil a contract's obligations. Managers or relevant users among the sales staff may be automatically notified when contractual obligations are not met or when the expiration of a contract is pending.

15   **Customer service module**

A customer service module used for registration of complaints from customers and/or agencies is another part of the system. Apart from the registration of complaints the customer service module handles the actions which have to be taken in order to solve the problems as well as the follow-up tasks and the possible credits which the

20   customer and/or agency may obtain. The module also provides access to past information on the customers and/or agencies.

Pricing

The pricing module of the system is capable of handling the highly complex structure

25   of parameters that can influence the price model. It offers a high degree of flexibility to accommodate the ever-changing pricing models used by the various publishers. The parameters that influence the pricing are related to the individual customer and/or agency, the contract, the classification, the rate structure of the newspaper or other media and the special discount or rebate structure of the individual customer and/or

30   agency.

Furthermore, the price of the advertisement can vary according to the advertisement type, the size of the advertisement, the package for which the advertisement is booked, the run schedule of the advertisement, special requests for page and position, colour usage, amount of special build up to be performed, use of logos, images and graphics as well as other properties assigned to the advertisement.

It is possible to redefine the individual parameters as well as restructure the way they are used. This makes it possible not only to use the price model that is currently valid, but also to use a past or future pricing of advertisements according to the price model that was or will be valid at a specific time.

In spite of the complexity of the parameters influencing the pricing, it is transparent for both the user of the system and for the customer and/or agency. Transparency is achieved by using detailed levels of calculation that makes it possible to follow the calculation as a number of totals for each of the various pricing parameters.

Other vital parts of the price calculation are the support for multiple currencies, VAT calculation, possibility of calculating the price based on more than one customer and/or agency (agency customer relations, split pricing relations), contract discount calculation, promotion discount calculation, agency commission calculation and rebate calculation.

Reservation and booking

In case a customer and/or agency requests a specific positioning of an advertisement, the operator can, as part of the order entry process, easily get access to tentative advertisement positioning (space reservations) as well as already confirmed advertisement positioning (space bookings). The space reservation module includes a specific page, position, colour and size of an advertisement. The media publisher can, in expectation of a later arriving booking confirmation, reserve a specific space for a customer and/or agency.

The space-booking module controls the confirmed bookings as well as the reservations that are temporarily placed for a given publication. Every advertisement booking is compared to the planned publication. If any deviations between the advertisement booking and the planned publication are identified, they will be

5   evaluated and reacted upon and relevant users will be notified of the possible conflicts.

Order confirmation

Following the booking and advertisement building, the system provides several

10   different ways of providing the customer and/or agency with an order confirmation. The detailed level of information supported by the WYSIWYG editor allows the customers and/or agencies to be presented with a single confirmation that covers all the information concerning an advertisement booking such as pricing, discount information, presentations, media, zoning, etc.

15

The customer and/or agency can be provided with an order confirmation sent as an e-mail through e.g. e-mail server 50 with automatically attached files based on the booking information (e.g. a PDF proof of a printed advertisement), or as a printed proof including advertisement booking information and sent by regular mail. An

20   order confirmation may also be provided by fax in which case a printed proof can be used. Alternatively, a fax can electronically be sent from the user's workstation or through a general fax input/output system 35.

Invoicing

25   The invoicing module of the system generates the detailed information needed for invoicing. This information can also be passed on to a third party invoicing and accounts receivable system. The normal invoicing period may be a batch process initiated once a month, once a week, once a day, or according to the interval required by the individual publisher as the normal invoicing period.

30

Invoicing involves a number of operations such as: generating financial information is based on customer and/or agency details, advertisement details, insertion details, price

calculation details and various other details set up by the system. Based on the generated financial-details the physical (printed) documents are created.

Information about customers and/or agencies – account balances

5   In the system, the account balances are viewable, e.g. for checking the credit limit. The accounts receivable system may be used as a master for this balance information and an interface is supported from the system to the accounts receivable system and vice versa.

10   **Information about payments**

In the system it is possible to view whether certain items have been paid or not together with a list of the payments made by the individual customer and/or agency. The handling of payments, interest calculation and reminders are done by the accounts receivable system. Prepayments are handled separately to avoid invoicing the

15   customer and/or agency twice, and are based on an interface with the accounts receivable system. Some changes to advertisements or the pricing structure may have an impact on already invoiced (and perhaps even paid) advertisements. The system may comprise means to handle these kinds of problems, such as means to manage the issuance of credit notes or of additional invoices.

20

Sales force automation

Sales force automation tools are made generally available in the system to support and ease the work of a sales staff associated with advertisement bookings and sales in a medium or media. These tools are tightly integrated with the data of the rest of the

25   system as well as with the external systems through which activities with contacts and colleagues are made (e.g. the telephone system, the fax system 35 or e-mail system 40.) In this way data duplication is avoided and it is possible to update schedules or activity lists and to initiate and record telephone, fax or e-mail calls.

Contact manager and Activity manager

The contact manager module allows the creation and easy maintenance of structured relationships between customers and/or agencies, accounts and advertisement

5 bookings. Furthermore, it is possible to perform automatic dial-up, fax and e-mail functions directly from the contact manager. The activity manager module includes extensive task administration and calendar functionality for the sales staff. It also provides automatic journal functionality that records all phone call, e-mail and fax operations relating to a contact. In this way the activity manager keeps track of all

10 interaction with contacts, both scheduled and historical.

Target manager

The target manager module assists the sales staff in selecting the proper target group for canvassing or for special promotions and sales campaigns. By means of a highly

15 customisable interface, the target manager assists in selecting a target group among the potential customers and/or agencies in the database 5. This can be on the basis of criteria such as geographical location, business type, etc. When a target group has been identified an appropriate type of activity is selected. Among the activities, which the target manager may support are direct mail campaigns where letters are printed

20 based on a template document containing automatically inserted customer and/or agency information, or e-mail campaigns where e-mails automatically are sent to the target group.

Other activities are call sheets where a selected group among the sales staff will be

25 presented with a number of tasks in their respective activity manager. These tasks contain links to the contact manager and hereby the sales staff can retrieve the required information to fulfil the phone call which, in return, will be added to the journal of the (potential) customer and/or agency.

30 ## Management of special promotions and campaigns

In the advertisement system it may be possible to select sets of customers and/or agencies for canvassing and assign them to a campaign. Every campaign has a unique

identity. Any activity related to that campaign are recorded and monitored in order to follow up on the results. The canvassing module is tightly integrated with the other sales tools. It is also possible for the media publishers to define marketing campaigns, which do not involve any specific scheduled contact between sales people and

5   customers and/or agencies and to measure the effectiveness of campaigns by analyzing advertising trends during and immediately after the campaign.

Offline sales tools

Due to the basic design of system where a fat client holds many of the standard data

10   and functionality, the external sales staff can, without connection to the main servers, still enter into a dialog with a potential customer and/or agency based on information downloaded to the local workstation prior to the sales call. Another option is to connect to the main servers from the customer's and/or agency's location.

15   Remote advertisement entry

The system provides several different ways of entering advertisements and advertisement bookings. As for the external sales staff, certain customers and/or agencies can also be granted remote access (although restricted) to the system. This customer and/or agency access may range from very limited access that only allows

20   customers and/or agencies to monitor their current activities to very complex booking options where the customer and/or agency can book new advertisements or deliver completed advertisements or required electronic material for the advertisement building. The booking options are designed with a very intuitive user interface that provides the customer and/or agency with tools to complete new bookings in a

25   seamless way.

The system also provides a standard API, which enables the establishment of Internet access for real time order entry, Internet advertisement pricing, etc. Any advertisement order received from the Internet or any other external source is created and stored in the system exactly as if it had been created by the in-house sales staff.

30   Orders and advertisement content may either always, or based on parsing of the

advertisement order or content be routed to internal sales staff for control or delay routing for credit checking.

Box office – confidential box

5 The purpose of the box office module is to allow the customer and/or agency to remain anonymous. In order to do so, the advertisement does not contain the customer's and/or agency's name, address, telephone number or anything, which can identify the advertiser as a person. Instead, the advertisement contains a so-called box number, which people can respond to, i.e. send or phone a response to the newspaper

10 with references to the relevant box number. The box office module in the system supports all the manual functions such as collecting and forwarding replies to the customer and/or agency. The forwarding of replies includes the set-up of a number of standard letters where a number of attributes (e.g. customer and/or agency name, address and number of replies) are automatically inserted.

15

The box office module may support at least the following types of boxes:

* A "virtual" box where the replies are sorted by the staff and manually forwarded by mail to the customer and/or agency .
* A physical box at the publisher's premises where the customer and/or agency can

20 collect his or her mail.

* A voice mail system where the customer and/or agency can rent the voice mail box, and hence have access to the replies over the phone.

Reports and statistics

25 The system according to the present invention has been built to be an advanced and up-front information system for all user or operator groups at large media publishing houses. As such, the system provides a complete information profile on each customer and/or agency, printed or electronic publication, product, etc.

30 One of the most important demands from media publishers today is to be able to learn from experience. The present system supports these requirements by storing all information at a very detailed level, enabling automatic data analysis. This information can be used for serving customer and/or agency market demands in an

optimum way. As the system keeps all information at a very detailed level, it provides the possibility of making reports and statistics on almost any level of details. Some reports include full specification whereas others only include the totals for a limited period of time. Reports and statistics can be run on the screen or printed

5   depending on the requirements of the individual user. The key point is that, if required, the users themselves can easily generate the reports and statistics.

CLAIMS

1. An advertisement sales and management computer system comprising:

5   data storage means, data retrieval means and data processing means

database means

and a number of workstations,

10

one or more of the workstations being adapted to perform one or more of the tasks
selected from the group consisting of:

entering advertisement orders into the database means,

15   entering advertisement-associated data into the database means and retrieving
advertisement-associated data from the database means,
entering customer and/or agency-associated data into the database means and
retrieving customer and/or agency-associated data from the database means,

20   the database means being adapted to store and manage data comprising at least

   - advertisement customer and/or agency information,
   - order data comprising data related to an advertisement or a group of related
     advertisements, including

25   - a medium or media in which the advertisement or individual advertisement of the
     group of related advertisements is/are to appear, and
       - schedule information for publication of respective advertisements, the
         schedule information comprising insertions of the respective advertisements in
         respective media,

30   - contents of respective advertisements,
   - presentation elements of respective advertisements,

the computer system being adapted to generate data defining advertisements or groups of related advertisements on the basis of entered order data,

the computer system thereby constituting a single system permitting sale and
5   management of several related advertisements in several media based on entry of a
single order.

2. A system according to claim 1, wherein the media comprise both printed media and electronic media.

10

3. A system according to claim 1 or 2, wherein the database means is capable of storing and managing, based on a single order, a group of related advertisements each to be published in a particular medium, each advertisement having associated therewith one or several sets of schedule information, each set of schedule
15   information having associated therewith one or several insertions, the version of an advertisement published in an insertion being identical or non-identical to versions of the advertisement published in other insertions thereof.

4. A system according to claim 3, wherein the database means and the data processing
20   means are adapted to create versions of an advertisement on the basis of the database data comprising contents of the advertisement and presentation elements of the advertisement.

5. A system according to any of the preceding claims wherein the contents of the
25   advertisement comprise information elements selected from the group consisting of graphical information elements such as text, logos, photos, artwork; sounds, videos, and animations.

6. A system according to any of the preceding claims, wherein the data defining
30   presentation elements of the advertisement comprise data defining elements selected from the group consisting of the size of the advertisement in a printed medium, typeface or font, font size, co-ordinates for placement of text, relative positions between graphical information elements, colour of graphical information elements or parts thereof, borders, shading and three-dimensional effects.

7. A system according to any of the preceding claims, wherein the media comprise media selected from the group consisting of newspapers, magazines, paper or electronic books, electronic newspapers, electronic magazines, news streamers,

5   running message displays, news-banners, TV, movies, data carriers such as CD ROMs, DVD discs, magnetic discs, DAT tapes, videos, radio, stationary telephones, mobile (cellular) telephones, teletext, public networks, including the internet, inserts, onserts, and posters.

10   8. A system according to any of the preceding claims, wherein data relating to schedules for a particular advertisement comprise or relate to data defining one or several insertions of the advertisement in each of the respective media, the physical presentation of the advertisement of each insertion being established on the basis of the data in the database relating to contents and the presentation elements of the

15   advertisement.

9. A system according to claim 8, wherein a number of attributes are stored in the database and associated with the data defining each insertion, the attributes being attributes selected from the group consisting of: title of the specific species of the

20   medium, zone of the specific species of the medium, section/classification of the particular species of the medium, the version of the advertisement, as established by contents and presentation element data, time- and/or event-related data for the publication of the advertisement

25   10. A system according to any of the preceding claims, wherein price data are stored in the database means so that they are relatable to advertisement data selected from the group consisting of the physical presentation of the advertisement established on the basis of the contents and the presentation elements of the advertisement, insertion data/attributes, schedule data, media data, customer and/or agency data, and order

30   structure, thus enabling calculation of the price of an order when the order has been fully defined.

11. A system according to claim 10, wherein price data are relatable to advertisement data comprising customer and/or agency contract or contracts data stored in the

database, thus enabling the price calculation to be based on customer and/or agency price agreements.

12. A system according to claim 10 or 11, wherein calculation and display of the price of an order is performed dynamically during establishment of the order, a price displayed on the display of a workstation reflecting the aspects of the order which have been defined or which are being defined.

13. A system according to any of the preceding claims, wherein entry or editing of graphical advertisement contents and presentation elements in the database is provided by means of a WYSIWYG editor which communicates with data stored in the database defining graphical presentation elements of the advertisement stored in the database and is adapted to display, on a screen of at least one workstation of the system, the information elements in the graphical representation defined by the data.

14. A system according to any of the preceding claims, comprising data transfer means for communicating advertisement data from the database to a file, file system or database means associated with an advertisement planning and/or production system.

15. A system according to claim 14, wherein the data transfer means is selected from the group consisting of:

address pointers, serial or parallel databuses, public telephone networks, LANs, WANs, public networks including the Internet.

16. A system according to any of the preceding claims, wherein the data stored and managed by the database means comprise data defining a graphical user interface and/or other function parameters of an individual workstation or individual workstations, and/or the data model used from an individual workstation or individual workstations in the computer system.

17. A system according to claim 16, wherein the defining data are related to a target media for an advertisement or advertisements being sold or managed, and/or to a task of a workstation operator, and/or access rights of the operator.

5   18. A system according to claim 16 or 17, which enables adaptation of the graphical user interface and/or other function parameters of the individual workstation(s) and/or the data model without modifying binary code of the computer system.
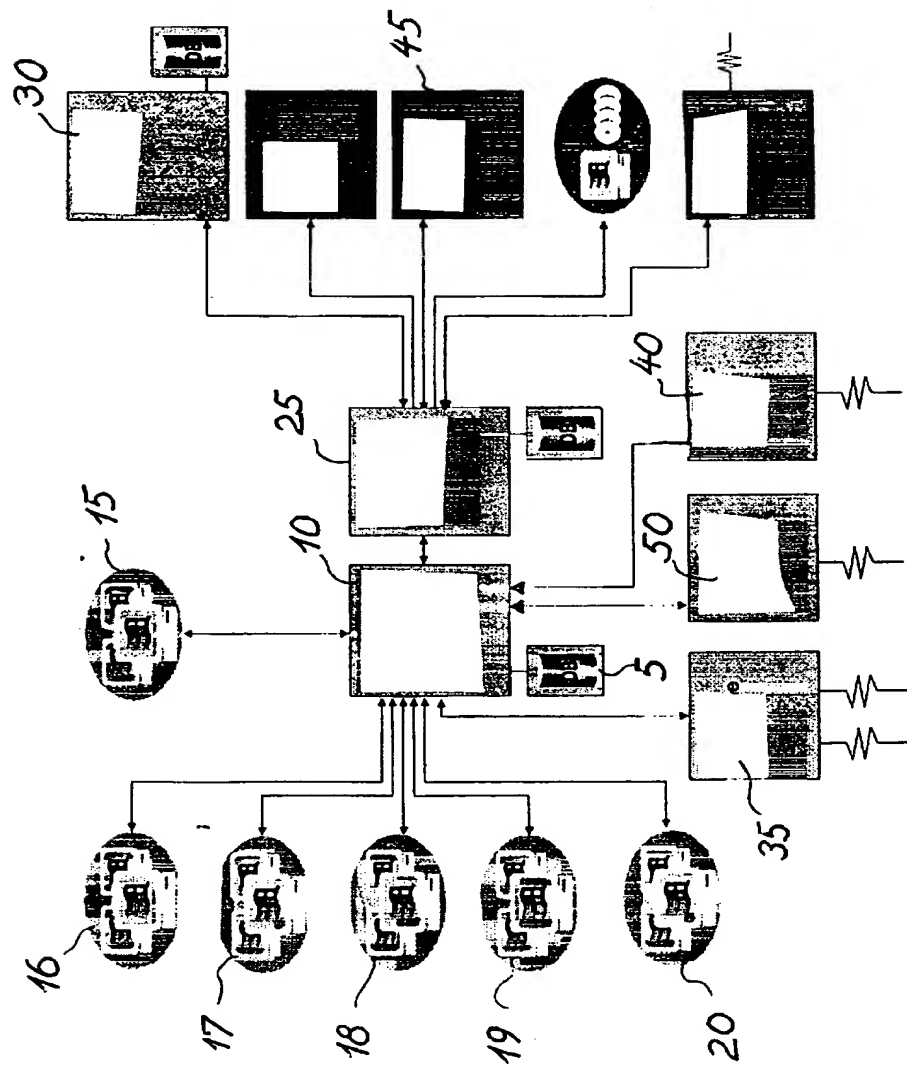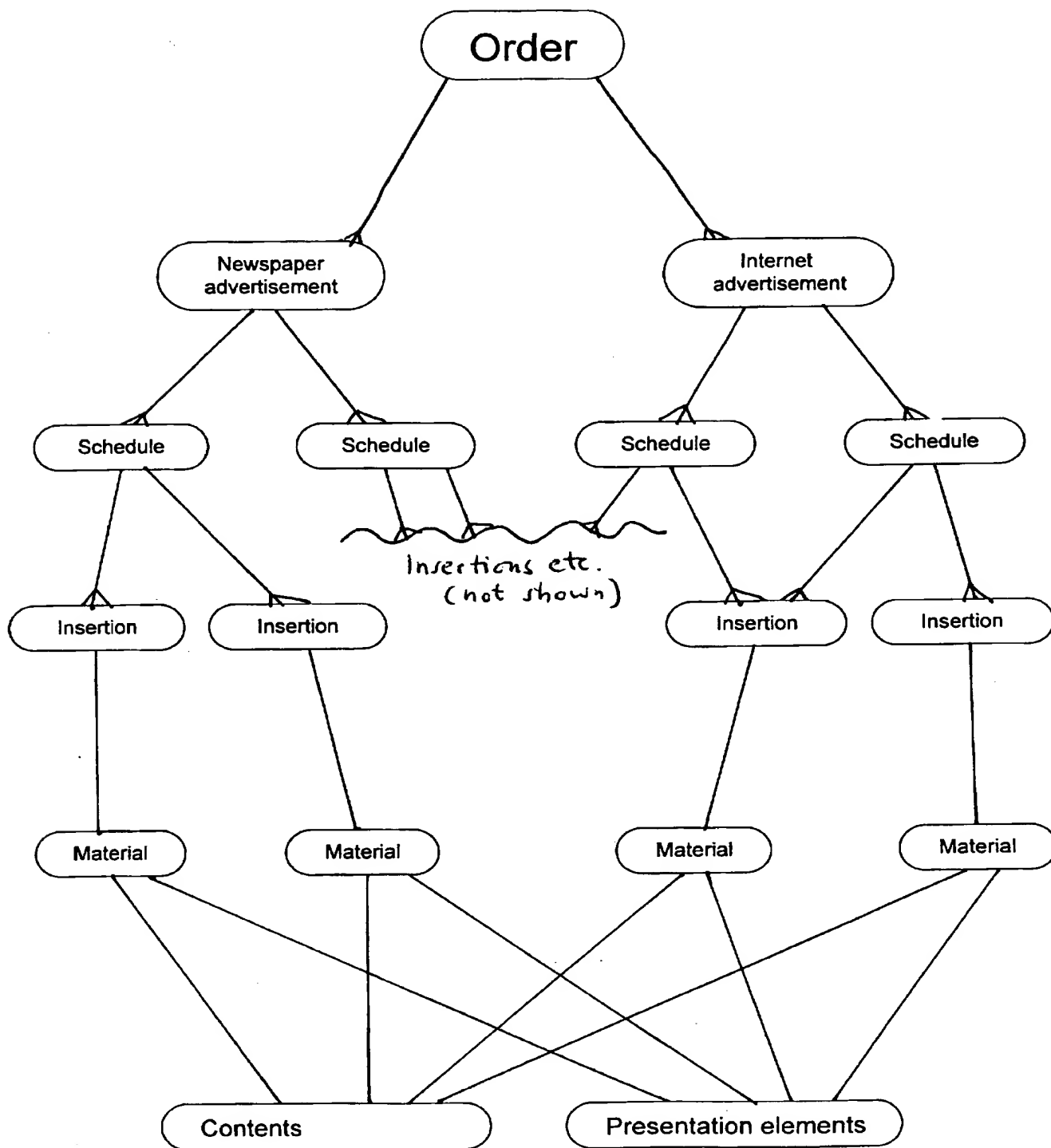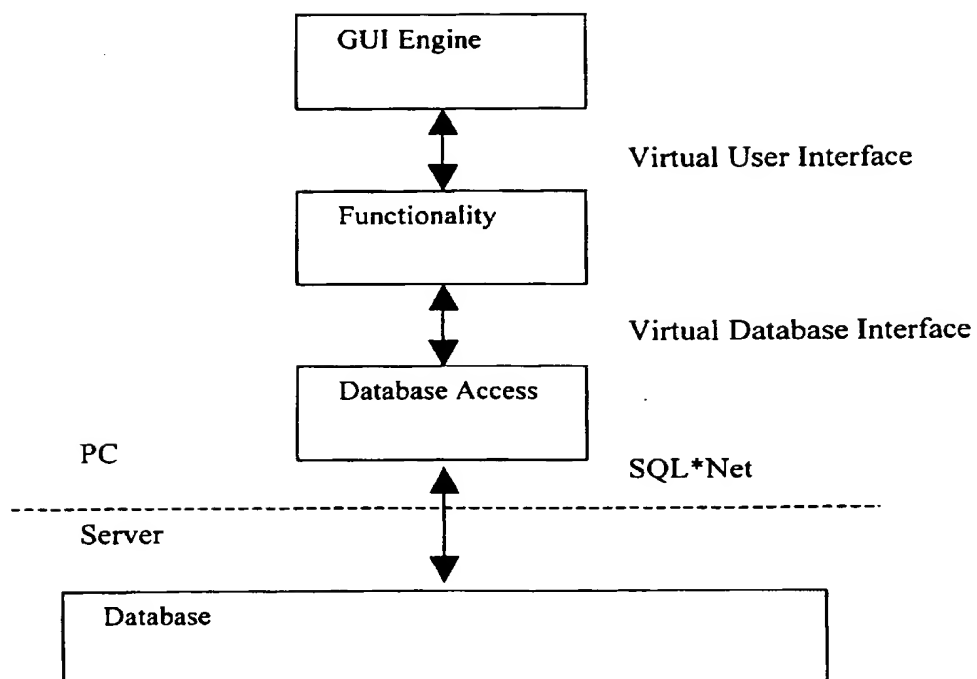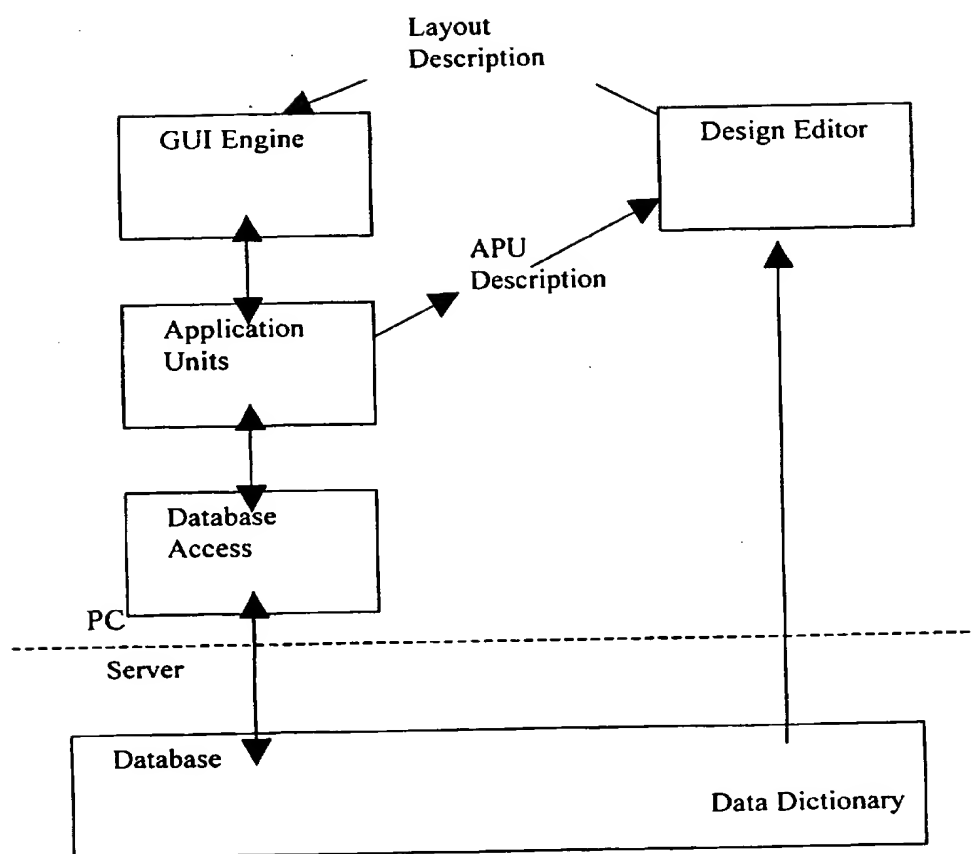
Fig. 1

Fig. 2

Fig. 3

Fig. 4